Citizens' Bulletin

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The Connecticut Department of Environmental Protection

Harkness: A Place at The Shore...

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Cover Photo: Door, Harkness mansion: Rosemary Gutbrod

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State park campers reserve earlier, plan longer stays

Families making reservations for campsites in State parks and forests this summer want to stay for longer periods than in other years, according to Analyst Joseph Gurskis of the Parks & Recreation Unit of the Department of Environmental Protection.

"In the past," he said, "many families would book three or four nights around a weekend. Then they would go home, and a week or two later they would book three or four more, and so on all summer. This year, the price of gasoline and conservation efforts have them booking the maximum stay, which is 14 consecutive nights.

"Not only that," Gurskis added. "They are sending in their applications much earlier. Between January 1 and April 15, we received 2,748 applications, the most ever for this time of year. The 30-site camp at American Legion State Forest in Barkhamsted, for example, was sold out for Memorial Day weekend by mid-February, and only a few campsites there are left for the Fourth of July."

By April 15, all the most popular camping sections of the 538-site Hammonasset Beach State Park in Madison — such as Podunk Circle, Mohawk Circle, Quinnipiac Circle, and Beach Road — were reserved for the Fourth of July weekend. At the 169-site Rocky Neck State Park in Niantic the only remaining spaces over the Fourth are in the "tents only" section, which does not accommodate camping vehicles. At the 81-site Hopeville Pond State Park in Jewett City about 15 sites were left for Memorial Day and about 15 for the Fourth as of April 15.

Making reservations

People planning to make reservations should obtain a free copy of the folder "Camping Connecticut 1980" by phoning 566-2304 or by writing to: Parks & Recreation, 165 Capitol Avenue, Hartford 06115. The brochure lists the camps, gives the nightly fee for each, and includes the official application blank and conditions of occupancy. Applications mailed after April 15 should not be sent to the Hartford office. Send them to the park or forest where you want to camp. (See address list below.)

Connecticut does not charge for making reservations. Several other states do, some selling them through Ticketron. Connecticut's only charge is the per-night camping fee, which ranges from two to four dollars, depending on the camp selected. This fee admits either four adults or parents with any number of their unmarried children. The minimum reservation is for two consecutive nights, and the maximum for 14 consecutive nights. There are no one-night reservations.

Because early applicants are booking longer stays this summer, fewer people will succeed in getting confirmed reservations at the most popular locations: Hammonasset Beach, Rocky Neck, Hopeville Pond, Lake Waramaug, Housatonic Meadows, and Black Rock. But do not despair. There are 13 other State campgrounds with about 400 campsites. Two of these camps are for horse-owners and their vans.

Reservation system improved

Connecticut's present system for assigning campsites dates back to 1973. It replaced a system that permitted a great many campers to occupy their sites from 15 days to the whole summer, with assignment of sites made in a drawing under the supervision of the State Park and Forest Commission.

The 1973 change was the State's response to the fact that more and

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"The Connecticut Department of Environmental Protection is an equal opportunity agency that provides services, facilities and employment opportunities without regard to race, color, religion, age, sex, physical handicap, national origin, ancestry, marital status or political beliefs."

The Beast In the Garden

By Timothy Linkkila, DEP Wildlife Biologist

Leonard Lee Rue III Woodchuck

Now is the time when flowers bloom, gardens grow, lawns turn lush green, and lots of animals are born. Thus begins the annual contest between homeowners and wildlife to decide who gets the harvest. This contest has been waged each year since man first cultivated crops and will continue to be waged as long as agriculture continues. It is safe to say that man may win a skirmish or two, but he will never win the war.

Chipmunks, rabbits, mice, voles, raccoons, squirrels, woodchucks, and birds are the notable culprits causing damage to gardens, flowers, and shrubs in Connecticut. Damage commonly occurs at three periods during the life of the plant. Wildlife can damage plants during the seed stage, the growing stage, and the fruit stage.

When the seeds or bulbs are first planted, birds, voles, chipmunks, squirrels, and mice may dig up and eat seeds or bulbs. Chipmunks, rabbits, mice, raccoons, squirrels, and woodchucks eat the tender young shoots of vegetables and flowers. Chipmunks, rabbits, mice, raccoons, squirrels, woodchucks, and birds can wreak havoc on fruits and vegetables.

When these animals become pests and their activities or populations must be controlled, there are three general approaches which can be undertaken to control them and prevent the destruction of crops and ornamentals. You can change the habitat, restrict access to the plants, and/or eliminate the animals.

Since each species has individual requirements for food, water, and cover, it may be possible to alter an area to exclude one of these essentials, causing the animals to move elsewhere. Removing brush piles, rubbish piles, dense ground cover, and stone piles; closing openings under sheds and buildings; and keeping all grass areas mowed short remove places where many animals find protection from natural predators and shelter to raise their young. Without these protected areas the animals will move and your garden and shrubs will be safe.

Fencing is a common practice which prevents animals from reaching the food. To prevent rabbit and woodchuck damage to gardens, erect a three-foot-high fence buried six inches deep. Effective fence materials are heavy duty one- or two-inch mesh poultry wire or one-by-two-inch mesh welded wire. Your local hardware store or feed dealer should have this or other suitable wire in stock. To keep out raccoons, add an electric fence eight inches above the ground along the outside edge of the fence erected for rabbits and woodchucks.

Damage to trees and shrubs caused by the debarking of trunks or the removal of limbs and buds by mice, voles, and rabbits can be prevented by surrounding the trunks of larger trees and shrubs and entire seedlings with two-to-three foot high hardware cloth. Hardware cloth is a stiff one-quarter to one-half inch welded wire mesh. Covering fruits and berries with tobacco or other netting will decrease bird damage. Coverings can go over each individual bush, or an entire area containing many bushes may be covered with netting for a cage effect.

Chemical repellents are applied directly to the seed, plant, or fruit.

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Yes, there ARE good millionaires

Harkness Memorial was a gift from a couple who gave half a billion

By John Waters

Today, it's the thing to denounce early American millionaires as robber barons. But detractors would be hard put to bad mouth the remarkable couple who gave Connecticut the 42-room Italianate mansion and the 235 acres of glorious gardens, magnificent trees, manicured boxwood hedges, and picturesque beach that now form Harkness Memorial State Park at Waterford, about five miles southwest of New London.

Money was for giving

The couple were Edward and Mary Harkness. To them, "wealth beyond the dreams of avarice" was not just an expression: it was a simple fact of life. Living on a scale of grandeur truly regal, they nevertheless regarded their almost limitless wealth as a responsibility and saw in it an opportunity to alleviate misery and improve the cultural resources of communities and institutions.

From Waterford and their other homes in New York City; Manhasset, Long Island; Aiken, South Carolina; Santa Barbara, California; and St. Hubert's Club in the Adirondacks, they quietly donated more than half a billion dollars to charities large and small, ranging from Yale, to which they gave more than $24,000,000, to the Groton State Police Barracks, to which they gave two fully equipped ambulances.

Their gifts to hospitals and medical services assisted such widely different institutions as the Waterford Public Health and Nursing Service and the world-famous Presbyterian Hospital of New York; the Lawrence & Memorial Hospital, New London, and Babies Hospital in New York. Harvard and Columbia got $13,000,000 apiece; and other huge sums went to Black institutions such as Tuskegee Institute, Hampton Institute, Fisk University and Atlanta University.

Charity was more than checks

To the Harknesses, giving consisted of much more than check-writing. Mrs. Harkness sought to brighten the lives of Coast Guardsmen on duty aboard lightships by sending them radios. Her compassion for polio-stricken children led her to bring 30 of them to her estate from New York in the summer of 1920.

Rosemary Gutbrod

To provide a rest home for the children, she remodeled one of the houses on the east end of the estate, staffed it with graduate nurses, and gave the crippled city kids a taste of country life under carefully controlled conditions. She even went so far as to pay their parents' fare to Waterford once a month. The children, who had all been patients at New York Orthopedic Hospital, were from four to 12 years old, boys and girls in equal numbers. They were privileged to return every summer until they were 12; at that age younger children replaced them. Every week, Mrs. Harkness spent time with the children to observe their progress and encourage them. Mr. Harkness, a gentle, sensitive man, often joined her.

The first year was such a success that the project was repeated every year until 1943. Then because Goshen Point, the site of the camp, was considered a strategic location, the camp was closed and barracks replaced it for the duration of World War II. Gun emplacements were built on the estate to protect a nearby submarine base.

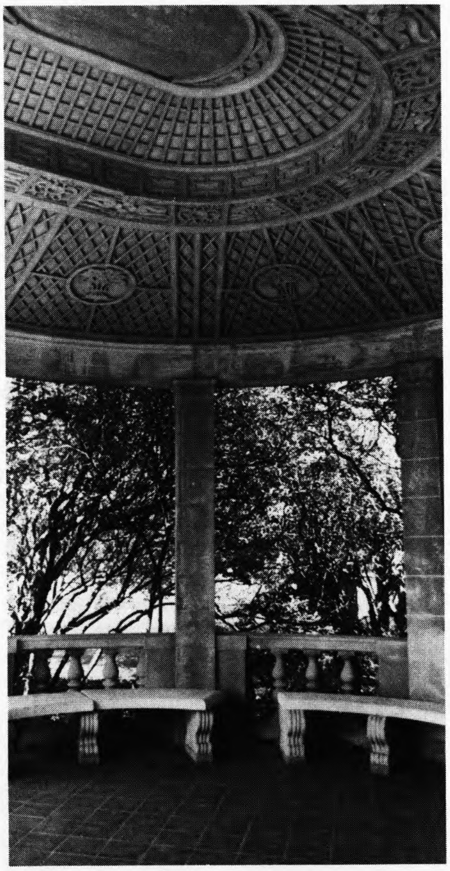
When Mrs. Harkness died in 1950, she willed the buildings and land to the State with the proviso that they be used in a way that would promote public health. Today, the State carries on the therapeutic and rehabilitation programs the Harknesses started, providing 23 cottages for 350 young people with various handicaps and conducting classes for pre-school victims of cerebral palsy. More than half the acreage of the estate is devoted to these year-round activities.

For humanitarian reasons, a sandy beach for swimming is reserved for these patients with special needs. Visitors to the public section of the park, which is administered by DEP's Parks & Recreation Unit, are not permitted in the area for the handicapped.

Other beneficiaries of Harkness generosity include Colonial Williamsburg, to which they donated their Gilbert Stuart portrait of George Washington; the Marine Historical Association to which they gave $50,000 to help with the restoration of Mystic Seaport; and Connecticut College for Women, for which they provided money for a new chapel and a new dormitory. These by no means exhaust the list of their benefactions, but Edward Harkness is said to have been a shy, self-effacing man who liked to make his gifts anonymously and who rarely attended dedication ceremonies for projects his gifts had made possible.

Shoemaker's children?

Where did the Harknesses' seemingly limitless money come from? It came from a man described as an uneducated but ambitious shoemaker who established, once and for all, that a shoemaker's children don't necessarily go barefoot. He was Stephen Harkness, who started as an apprentice in a factory that made shoes and harnesses. After Harkness took over the business, he built it into a chain of factories.



Rosemary Gutbrod

In 1870, another ambitious man was trying to raise capital to put together an oil company. Harkness heard of the opportunity and took the plunge with almost every cent he had. It all turned out well because the other man was John D. Rockefeller, and Harkness became one of the original backers of Standard Oil.

Soon wealthy, Stephen Harkness invested in other growing businesses, notably railroads. In fact, the Southern Pacific Railroad may well have been the Cupid who brought Stephen's son, Edward, and Miss Mary Stillman of Mystic together. Edward was involved in the management of the line, and Mary's father was its general counsel. Shortly after their marriage in 1904, the couple took over the Waterford property where, in 1902, Mrs. Harkness' sister had started to build a home. They completed the project, making it their 42-room summer home and naming it "Eolia," inspired by Homer's lines in the Odyssey:

> We made our landfall on Eolia Island, domain of Eolus Hippotades the Wind King, dear to the gods who never die. Now these lords, in their parents' company, sup every day in the hall in a royal feast, and all the night they sleep on beds of filigree.

A place in the country

Built on the high ground of Goshen Point, at the mouth of the Thames River and a few miles east of Millstone Point, Eolia commanded an exciting view of Fishers Island Sound, Block Island, and Long Island in fair weather. The three-story stone mansion, covered with climbing actinidia, stood about a quarter of a mile from the water. The first floor consisted of 11 main rooms, two baths, and miscellaneous service rooms including a "flower pantry." The house was designed around a 32-by-50 foot living hall that featured a handsome staircase and teakwood floors in a herringbone parquet design. Its French doors gave a distant view of the sea and of masses of hydrangea and rhododendron.

Two porticos extended seaward from the rear of the living hall. One was glassed in and served as a breakfast room; the other was open for warm weather enjoyment. The breakfast room overlooked their private nine-hole golf course. Near it was the East Garden, filled with exotic flowering plants and Korean and Chinese statuary. Flanking the main room were a large music room on one side and a dining room on the other. Mrs. Harkness obviously loved flowers, for in addition to the flower pantry, there was a 6,000 square foot greenhouse, which was also used for vegetables and fruit. There is also touching evidence of the couple's affection for dogs; little gravestones marking where their five Irish terriers lie buried in the shadow of the water tower.

Notable in the West Garden was its U-shaped pergola of Indiana limestone overhung with wisteria and fox grape. A sunken garden and reflecting pool added to the beauty of the scene. Plantings changed as the seasons changed, so there were always flowers to enjoy. There were trimmed English boxwoods about 200 years old, one group of them shaped to form Mrs. Harkness' initials. Reflecting her love of birds, a small sculpture of St. Francis of Assisi stood under a canopy of ivy. Fountains were placed here and there, and broad gravel paths ran between hedges of Japanese yew.

A 30-room garage

Like a feudal manor, Eolia was practically self-sufficient, with almost everything anybody might need or want right at hand. The 30-room garage, for example, was a car-buff's dream. It housed five cars, three limousines, and a truck. But that's not all. It had a hand-operated turntable so cars didn't have to be backed out. Remaining in the garage, and left to the State after Mrs. Harkness died in 1950, were a 1906 Edison electric car, a 1930 Ford Model A flat-bed truck, and a 12-cylinder 1937 Lincoln brougham. The truck is still on the estate. The Lincoln was bought and is treasured by a rare car collector.

The garage also contained five five-room apartments, presumably for the three chauffeurs and other help, as well as bowling alleys, a squash court, a billiard room, a "dog room," stables, dressing rooms, and showers. Tennis courts were nearby.

The estate's own windmill pumped water into the 20,000-gallon storage tank, and a herd of 80 registered Guernsey cattle kept the family and guests in whipped cream and plain old plebeian milk. Seven other houses were scattered around the estate, indicating where plots of land had been bought when the 235-acre composite was being put together. One such structure, called Dorcas House, became the nucleus of Mrs. Harkness' first summer camp for crippled children.

To keep this complex establishment running required about 60 employees. About 20 including cooks, housekeepers, and three butlers did indoor work. Outside, about 40 others, including gardeners, dairymen, maintenance people, guards, three chauffeurs, and an estate superintendent, kept busy. Even during the 1930 s, when wages and prices were low by today's standards, all these services cost the Harknesses about $1,000 a day.

Rex Brasher paintings

Although the mansion now houses all 874 of artist Rex Brasher's paintings of the birds of North America, these were not there when the Harknesses were alive. The State of Connecticut had bought them from Brasher in 1941, but it was not until 1953 – after Mrs. Harkness had died and left the property to the State in 1950 -- that they were taken out of storage in the State Library in Hartford and moved to Eolia. The paintings are exhibited between May and October, when the mansion is open to the public.

Special events

As State property, the mansion has sometimes been used for fund-raising affairs, presentations, and flower shows. One such event was a benefit ball to raise $5,000 for the Eugene O'Neill Memorial Theatre in Waterford. Complete with a balloon ascension, it was attended by many theatrical notables. Oddly enough, four years earlier, Connecticut Public Television filmed O'Neill's Pulitzer Prize winning play, Beyond the Horizon, and needed a locale showing farmland running down to the sea. A section of the Harkness grounds turned out to be just what CPTV wanted.

In 1977, the mansion was the scene of a dinner party for 500 sailing enthusiasts attending the presentation of silver trophies, by Governor Ella Grasso, to winners of the New York Times Invitational Sail Regatta. It has also been the site of garden shows of the Garden Clubs Council of Southeastern Connecticut.

Unfortunately, it is not practical to use the mansion for such events in the late fall, winter, or early spring. The building is kept at 50 degrees F. during the cold months and would have to be heated to higher temperatures several days in advance to get rid of dampness.

Pleasures for the public

Harkness Memorial State Park should appeal to people who enjoy the quieter, less muscular forms of recreation and who want some mental refreshment. Its glory is its gardens and hedges. The rare plants in the Oriental Garden bring the Far East to Connecticut, with a sunken pool and picturesque oriental statuary contributing to the illusion.

In striking contrast is the symmetry of the formal West Garden, in which plantings are timed so that the flowers are always appropriate to the seasons.

For architecture buffs, the mansion itself is a treat. In an Italian style of design, it is made of limestone blocks joined with cement in which finely screened pebbles were mixed to provide a rough textured effect. Indoors, the paneling, the handsome embossed ceilings, and the parquet floors are niceties of construction seldom found in modern structures; and the size and grandeur of this "summer cottage" bring before our eyes the exuberance and optimism of the early decades of our century. Unfortunately, the original furnishings were not willed to the State and are gone.

Bird-lovers, ornithologists, and artists, of course, will strike it rich in the 874 watercolors that Rex Brasher painted of 1,201 species and subspecies of North American birds in their native habitats. Because all 874 cannot be displayed at the same time, a couple of hundred are hung for half the summer then replaced with others. Black and white reproductions of some of the watercolors are on sale for fifty cents at the entrance to the mansion.

Salt-water fishermen can take their pleasure, and perhaps some fish, on the rocks on the estate's Goshen Point, but swimming is not allowed. Picnicking is especially pleasant on these grounds. Sturdy tables shaded by huge copper beeches, spreading horse-chestnut trees, and Norway maples overlook Long Island Sound. There are no food concessions or vending machines, so pack a picnic of your own.

Hours and open season

The grounds of that part of the park which the general public may use are open every day of the year from 8 a.m. to sunset. Admission is free when the mansion is closed, but a parking charge of $1 per car is payable at the entrance gate when the mansion is open.

This year, the mansion opened May 24, the weekend before Memorial Day, and will remain open every day through Labor Day, September 1.

The mansion is open from 10 a.m. to 5 p.m. daily. A leaflet describing Harkness Memorial State Park is available free. Write to Parks & Recreation, Room 265, 165 Capitol Avenue, Hartford, CT 06115. Or phone: 566-2304.

If you are approaching from the west, leave U.S. 95 at Exit 75 and take Rt. 1A to Rt. 156. At Rt. 156, turn right and proceed to Rt. 213. Turn left and take Rt. 213 to Great Neck Road. Turn right to park entrance. If you are approaching from east of New London, turn left off U.S. 95 onto U.S. 1 and proceed to Rt. 213. Follow Rt. 213 to Great Neck Road. Turn onto it and proceed to the park entrance.

P.S.

We hope you enjoy your visit and come back feeling like a millionaire!

Forget names?

These may boggle your mind, but Rex Brasher remembered and loved and painted them all

Be not dismayed if you think the gallinule and the ancient murrelet are medieval French dances, or that the chachalaca is pure flamenco. Neither be embarrassed if you confuse a bluefooted booby with a bufflehead or even a dickcissel.

You are not alone. Many are they who would identify a wandering tattler with a Watergate reporter, or would innocently ask their hardware dealer for a European widgeon.

Such knowledge is strictly for the birds, you say? You are right! Each of these oddball names belongs to one of the 1,201 species or subspecies of North American birds painted by Rex Brasher, Connecticut's famous water-colorist and ornithologist.

If the above-mentioned avian oddities are not enough to send you running to Harkness on the double, perhaps some of the following — also on display from time to time — will catch your fancy: longtail jaegers, Chuckwill's Widows, old squaws, flying wheatears, groovebill anis, veerys, frosted poorwills, redleg kittiwakes, dowitchers, phainopeplas, shovelers, rhinoceros auklets, limpkins.

Our July issue will tell the story of the amazing man who spent 40 years of his life making 1,775 paintings of every species and subspecies of birds in North America and is regarded by many experts as better than Audubon, Agassiz, and Fuertes. ■

Maps, Maps, Maps And More

By Mark Fitzgerald

Attention hikers, fishermen, bird watchers, canoeists, cross-country skiers, and hunters. You will be interested to know that the Publication Sales Office, now in DEP's Natural Resources Center, can be of assistance to you.

The Publication Sales Office, located in Room 555 of the State Office Building, is the distribution center for various maps as well as other geologic, biologic, and hydrologic publications. In essence, it provides a bookstore full of information on natural resources and the outdoors that can be helpful to any enthusiast as well as to students, environmental groups, and town administrators.

The Natural Resources Center gathers, interprets, and disseminates information on Connecticut's natural resources. With the addition of the Publication Sales Office, which has previously operated out of the State Library and from DEP's Information and Education Unit, the Natural Resources Center also distributes the finished informational products. An advantage of this move is that the multi-disciplined staff of the Natural Resources Center is able to provide technical assistance when it is requested by a customer.

A few examples of the type of information available are listed below. Keep in mind that this is only a part of the material which can be purchased.

Among the items in great demand are the U.S. Geological Survey topographic maps which are popular with hikers, hunters, cross-country skiers, and fishermen. Connecticut is divided into 118 topographic quads or areas which are mapped with 10 foot contour intervals to show elevation or the "lay of the land." A variety of maps covering the entire State are also available. At a 1:125,000 scale, these are approximately three and one-half by four and one-half feet in size and show major roads, rivers, lakes, and ponds.

Also on file are aerial photographs of the state. A photographic flight is commissioned every five years, and the 1980 photos should be available this summer.

Publications printed for the Connecticut Geological and Natural History Survey cover a wide variety of subjects ranging from freshwater fishes to the minerals of Connecticut.

For an updated List of Publications, please send your request to: Publication Sales, Natural Resources Center, State Office Building, Room 555, 165 Capitol Avenue, Hartford, CT 06115. ■

Water Resources: April 1980

Average monthly streamflow for April was 125 percent of median in the eastern half of the State and 160 percent of median in the western half of the State. Month-end flow averaged 150 percent of median in the eastern half and 235 percent of median in the western half of the State.

The wet conditions from March continued into April with the storm on April 10 generating a 25-year flood in the southwest portion of the State. New maximum daily flows for April were set at Burlington Brook (47 years of record) and Pomperaug River (46 years of record) on April 10. Pomperaug also had the second highest April monthly flow for the period of record. If conditions are normal during May, runoff will be in the above normal range.

Reservoirs in four of the principal municipal systems contained 99 percent of usable capacity at month's end, the same as last month, and one percent less than last year. Usable contents were three percent above average for the end of April.

Groundwater levels rose seasonally in half the key wells this month, and all were above average for April and above those of last year at this time. Water levels were in the normal to high range throughout Connecticut and reached record highs for April in two key wells (Middletown well MT 261 with 25 years of record and Woodbury well WY 1 with 37 years of record). ■

▨

ABOVE NORMAL
Within the highest twenty-five percent of record for this month

☐

NORMAL RANGE
Between the highest and lowest twenty-five percent of record for this month

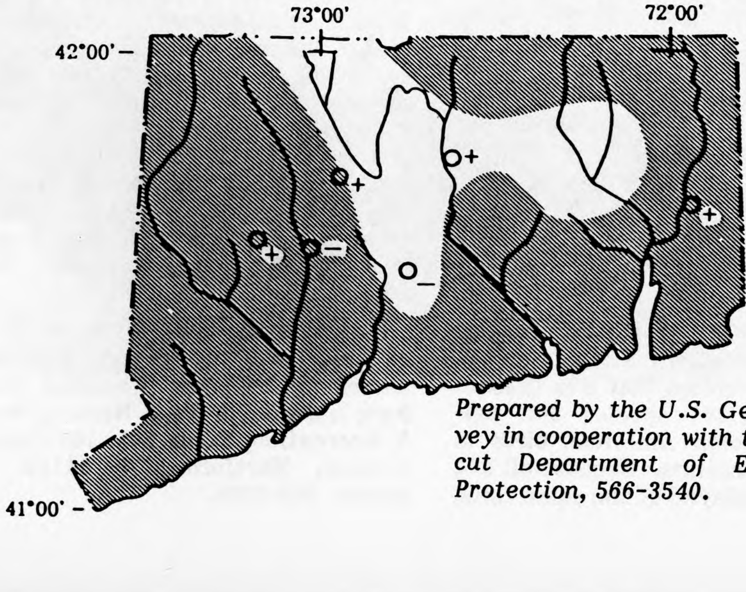
░

BELOW NORMAL
Within the lowest twenty-five percent of record for this month

+ *Water level rose since last month.*

— *Water level fell since last month.*

Map based on six long-term observation wells (with at least twenty years of record) and five others. Elsewhere conditions are generalized.



Prepared by the U.S. Geological Survey in cooperation with the Connecticut Department of Environmental Protection, 566-3540.

"BTU Bubble" allows cost-effective mix of energy savings, air pollution controls

By Leonard Bruckman, Director, DEP Air Compliance Unit

Rapidly rising oil prices and the increasing difference in cost between low and high sulfur fuels is creating an economic crunch of unparalleled proportions for Connecticut business and industry. Connecticut's environmental regulations, among the strictest in the nation, were developed in an era of comparatively low cost fuels. To meet the challenge of new high fuel costs, the Department of Environmental Protection has developed a new Air Pollution Control Program which allows a company to literally trade reductions in energy consumption for increases in the sulfur content of the fuels it burns. Since high sulfur fuels cost less than low sulfur fuels, the DEP is offering private enterprise a way to control air pollution effectively at far lower costs than standard regulatory techniques previously permitted, while at the same time encouraging the State's industries to use less energy.

Connecticut currently requires that low sulfur fuels be used to run our factories and power plants and to heat our homes. The State phased out the use of high sulfur coal and oil in the early 1970s. This was done because of widespread violations of the health standards for sulfur oxides, the gaseous compounds which are released as the sulfur-containing fuels are burned. Sulfur oxides are heavy, pungent, colorless gases which can seriously damage the lungs if concentrations become excessive. The use of low sulfur fuels has succeeded in eliminating violations of the health standards for sulfur oxides across the State. This has been Connecticut's most effective air pollution control strategy to date and is the cornerstone of the DEP's efforts to ensure the public's right to clean, healthful air.

Low sulfur fuels are considerably more expensive than higher sulfur fuels. Furthermore, the recent cost and supply pressures in the world marketplace have caused additional problems for fuel oil consumers. As a consequence, most states, those in the Northeast in particular, have relaxed their sulfur emission standards to the full extent the law allows, creating considerable economic pressure on Connecticut to relax our current low sulfur requirements.

One acceptable way to burn high sulfur fuels is to employ air pollution control equipment which removes the sulfur oxides before their release into the air. However, the high costs of such equipment have prevented most companies from choosing this option. Consequently, most companies use low sulfur fuels to comply with DEP's regulations.

Until now, allowable emissions have been based upon the total amount of oil a factory uses. The DEP has carefully reviewed the language of the regulations dealing with the permissible sulfur content of fuel and has determined that those methods of generating energy which do not release sulfur oxides, such as solar energy, should be allowed to "offset" sulfur oxides emitted by burning higher sulfur fuels. In effect, this new interpretation assumes that a factory would be permitted to key its "total" allowable emissions of sulfur oxides to the sum of all of its energy requirements including, but not restricted to, that portion supplied by the burning of oil. This is a totally new application of the Federal Environmental Protection Agency's so-called "bubble" concept of air pollution control.

Under current federal and State law, DEP, with EPA's help, develops an air pollution control plan — the State Implementation Plan for air quality or the "SIP" -- which details the measures Connecticut will take to meet air quality standards on a stack-by-stack basis. Under the basic bubble concept, control efforts will no longer focus on individual sources of air pollution within a factory (that is, individual chimneys and vents). Instead, the factory will be viewed as if it were contained within an imaginary bubble that has a single stack. As long as the pollution from this single chimney at the top of the bubble achieves the plant's air quality requirements, the factory may use the most cost-effective mix of controls inside the bubble.

In addition, the DEP is proposing what amounts to a "BTU bubble." Here the emissions of sulfur oxides from the single imaginary stack at the top of the bubble will be keyed to the plant's total energy use. If a factory reduces its energy use by one-half, it will be allowed to double the amount of sulfur in the fuel it still burns. The State's Attorney General's advice on this matter supports the DEP's new interpretation of its sulfur-in-fuel regulations.

A factory will be allowed to choose a "base year" other than 1979 to calculate its total energy requirements. This will allow companies that have already implemented energy reducing production techniques to be rewarded for past energy conservation efforts. If a base year other than 1979 is chosen, any approval to burn higher sulfur fuels will depend on a comparison of the plant's production rate for 1979 with that of the base year, in addition to its total energy use.

Thus, if a factory used the same amount of energy in, say, 1972 as in 1979, but the production rate tripled due to the use of more energy-efficient production methods, this plant would be permitted to triple the sulfur content of the fuel it burns. The reasoning behind this decision is

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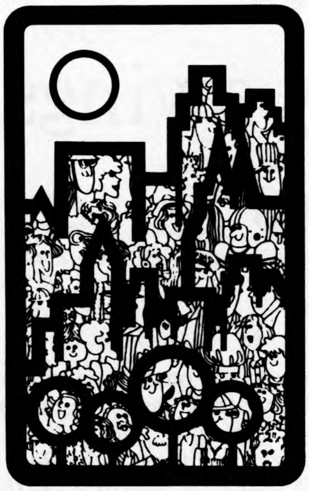
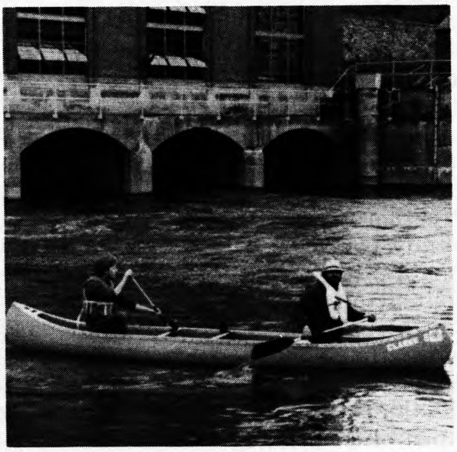


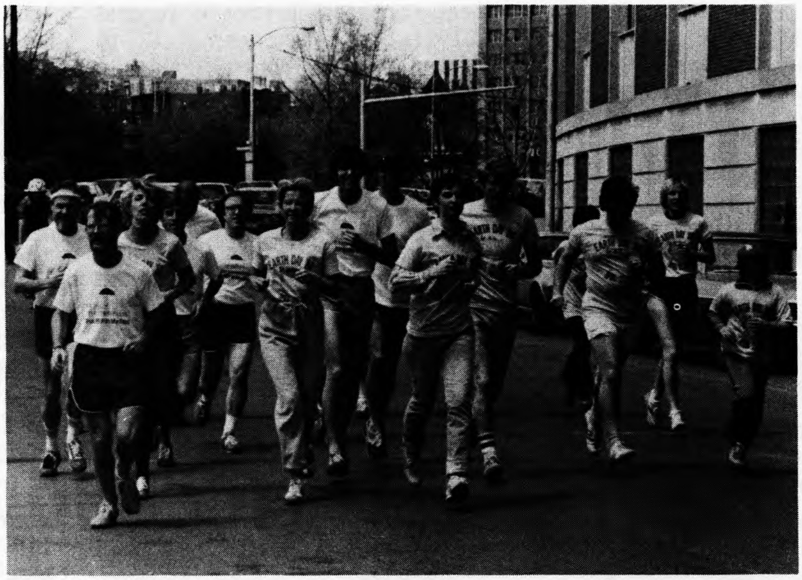
By Martina Delaney,
Citizens' Participation Coordinator

For Your Information

Earth Day revisited: April 22, 1980. Celebrations around the State included: Ten Years Late Jug Band, below, and, clockwise: a Housatonic Valley Association canoe trip on the Housatonic; alternative vehicles, runners, and Haddam Youthmobile's "litter monster" on parade around Hartford's Bushnell Park, DEP's electric car and other displays in the park.


Martina Delaney

Lois Norcross



Lois Norcross

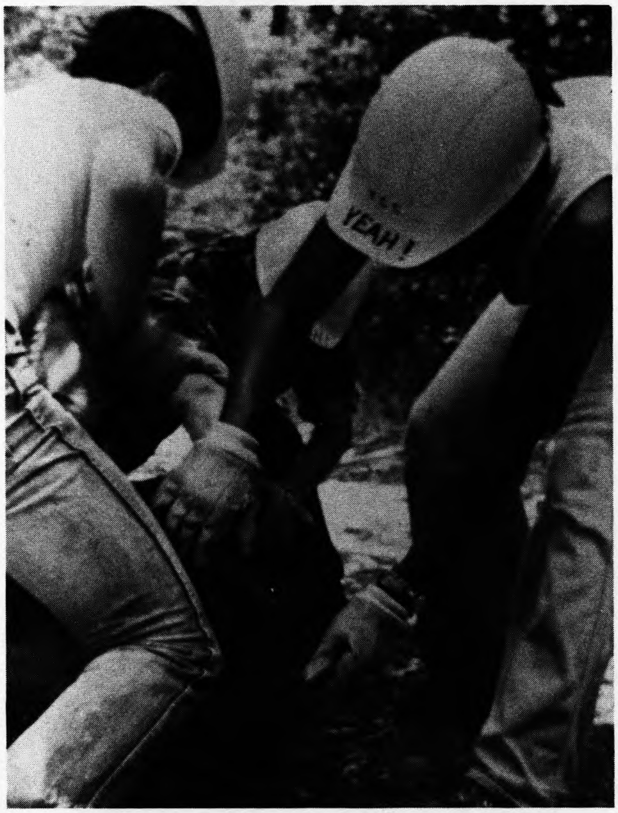
Budget cut hits young, jobless, and DEP projects

This summer, when you see a young person in a hard hat building a picnic shelter or trail or some other amenity in a State park or forest, take a good long look. Like the bald eagle and the Eastern cougar, if he or she is a member of Connecticut's Youth Conservation Corps (YCC) or Young Adult Conservation Corps (YACC) he's one of an endangered species.

This summer's 216 YCC members may be the last — at least for the foreseeable future. And federal funding for the YACC program most likely will end — or be reduced to ineffectual levels — at the close of the fiscal year on September 30.

The laws that created the programs remain on the books — but, for practical purposes, proposed federal fiscal 1981 budgets appear ready to "zero them out" by appropriating no money for either YCC or YACC, though YACC's chances of survival look slightly better.

Participants have been enthusiastic (see story on YCC our September 1979 issue). The program's users — federal programs and state conservation agencies like the DEP — have been just as positive. Connecticut's data says the programs are productive and cost-effective. "We've had a lot of success in both programs, and we believe in both programs," says Jan Kristof, Assistant Chief of DEP's Operations and Maintenance Unit. So what went wrong?



YCC staff photos

The culprits are the economy and Congress' efforts to balance the national budget, along with the fact that YCC and YACC do not specifically "target" the economically disadvantaged and inner city youths currently of greatest concern to federal lawmakers. (YACC, which began in 1978, was created under Title 8 of the CETA Program and is aimed at unemployed and out-of-school persons from 16 to 23 years old. YCC has been around in Connecticut since 1974 and has enrolled random cross-sections of young persons from 15 to 18 for eight week periods each summer).

Nationally, 34 percent of YACC members qualify as "disadvantaged." In Connecticut, according to Richard Couch, Chief of DEP's Operations and Maintenance Unit which administers YCC and YACC, 15 percent of the YACC members — and 22 percent of YCC members — are reported as disadvantaged. Neither figure, however, is particularly credible, Couch says, in that they depend upon the enrollee's self-certification that (s)he is "disadvantaged, and there is an emotional reluctance to make that statement." The lower number is also due in some degree to Connecticut's high income levels. However, 65 percent of Connecticut's YACC members either have completed only high school or have not completed high school — which in a tight economy and highly industrialized state puts them at a disadvantage in the employment market. Geography also complicates the "targeting" issue to a degree, since YACC participants cannot be transported but must be able to get to work stations on their own — and many of Connecticut's State facilities are in fairly remote rural areas. The YCC program, meanwhile, takes slightly more young persons from minority groups than are members of Connecticut's population as a whole, and 35 percent of YCC participants come from Connecticut cities of 50,000 or more.

As Couch sees it, for YCC and YACC the importance of the work is the key to the program's total success. "This is necessary work, on public lands, and the taxpayers of the State and nation will pay for it sooner or later, one way or another." So why not, he asks, through these proven, cost-effective programs which also provide some notably positive by-products.

"YACC gives young people a job, work experience, and skills that enable them to get better, unsubsidized employment. And it gives them a self-respect that comes from concrete achievement." YCC and YACC provide "real honest-to-God, true-to-life job experiences. They're not make-work projects that provide no feeling of satisfaction to the participants." The work, Couch points out, on our public lands produces something that can be used and enjoyed by all other citizens -- an improvement in the general "quality of life." The box shows a breakout, in dollar figures based on DEP field staff appraisals, of the amount of work YCC's six summers and YACC's two years have made available to Connecticut's citizens so far.

In concrete terms, these dollars translate into timber stand improvements, forest fire suppression efforts, stream improvements, fish stocking, work on salmon ponds and holding facilities, wildlife management projects, trail, fence and bridge construction, the building of picnic tables and fireplaces, amphitheaters, boardwalks, picnic shelters, and other facilities for State recreation areas, construction of YCC's own residential camp, and a variety of miscellaneous projects.

The young workers did needed work, and they did the jobs well. One of DEP's field managers reported on his experience with the first summer of YCC activities:

> YCC accomplished jobs that DEP would not have been able to do for some indeterminate period due to lack of working personnel.
>
> Production of the YCC crew while working compared favorably with DEP crew output.
>
> Appearance (quality and neatness) of YCC projects equaled the quality of many DEP finished projects.

Harder to gauge are the relatively intangible benefits claimed for participants in a program like YCC or YACC. One proof of success Couch cites is the fact that fifty-eight percent of those leaving Connecticut's YACC program find other jobs -- a high ratio compared to most other CETA programs. Many of these young people would not have been eligible for their new positions without their YACC experiences.

Comments from some former participants underline some of the other effects — learning, satisfaction, and environmental consciousness, for some examples. Some of the first summer's YCCers said:

> ...I got to do jobs and see places that I never would have done or seen if it hadn't been for the program. Using saws, hammers, wheelbarrows, etc., was all very new to me and enjoyable. (My family now considers me a "liberated woman.") I hadn't realized how beautiful Connecticut is until we had camped at such places as Putnam State Park, Bluff Point, and Pachaug State Forest.

YCC

	Total Federal Grant Monies	No. of Enrollees	Appraised Value of Work Accomplished
1974	$ 72,000	84	$ 187,000
1975	72,000	96	194,000
1976	231,000	150	201,000
1977	269,000	176	265,000
1978	374,000	200	290,000
1979	374,000	209	302,000
1980	351,000	216	218,000 est.
	1,743,000	1,131	1,720,000

RETURN: $.98 worth of work for every grant $1.

YACC

	Total Federal Grant Monies	No. of Enrollees	Appraised Value of Work Accomplished
1978	$ 900,172		$ 960,218
1979	837,816		1,006,885
1980	966,831		1,237,646
	2,704,819	654	3,204,646

RETURN: Three year average: $1.18 for every $1 grant money; now averaging $1.30 for every grant dollar. (By contrast other CETA programs have averaged $.60 worth of work for each $1 spent.)

> Projects that take concentration and plenty of team work such as the amphitheater and nature trail at Kettletown and the shelters are great for YCCers and really build one's pride. I also think each team should take time out to do small, petty jobs such as picking up litter. We did this at Sherwood Island on a Monday after the weekend crowd. We were all so disgusted we thought we'd clobber anyone we saw littering after that. It really made us realize how little things can make a big difference in the environment.

> Our major project, being an amphitheater at Kettletown State Park, was to my group an accomplishment far beyond our first hope and upon its completion a great success in its purpose to serve the people of Connecticut.

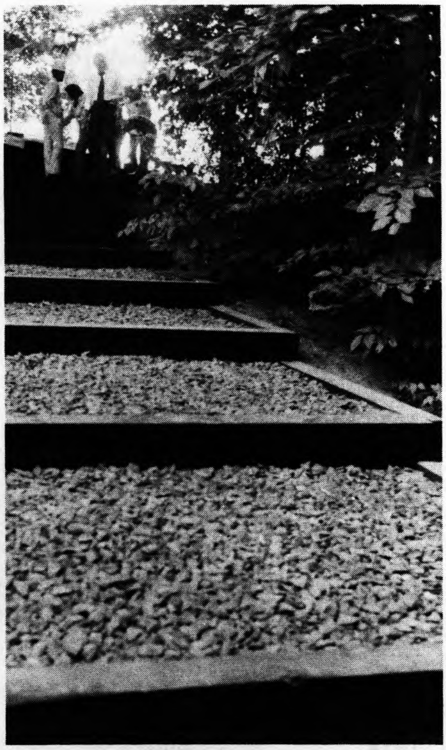
> As a comment on the project, I would like to say (including) teenagers from all sectors of life (poor, rich, black, white...) was the point that made the different teams unique... This gave the program a variety of people with different backgrounds and a chance for the members themselves to learn from each other...

An index of the success the programs have had in inculcating the "work ethic" might be the fact that the most frequent complaint from first-year YCC participants in their post-program comments was that tools and supplies were inadequate or arrived late, meaning participants had to wait around before they could get to work and progress on their projects was slowed down. "We've got that problem licked now," Couch says. "At the beginning it was just that we had underestimated the speed at which these kids work."

Couch noted, "The kids seem to like best those projects that let them build, shall we say, monuments to their summer's activities. They seem to delight in taking their parents and friends to see the physical manifestations of their efforts." He adds, as an afterthought, that costs per enrollee in the YCC and YACC programs show up as higher than they might precisely because they include the costs of supplies for many of these concrete projects as well as for administrative staffing. Which brings us back to the issue of money.

"As...program administrators," Couch says, "we would willingly take our fair share of the budget cuts. But these programs ought not to take more than their share. We're concerned that neither the youth of this nation nor its public lands are the cause of inflation, but rather its victims." He voices the additional concern that the cuts that will dismantle these programs take place "just at a time when unemployment is becoming an enormous problem."

"The concept of a Conservation Corps," he says, "is extremely popular, stemming from the legacy of the Civilian Conservation Corps earlier this century. The YCC and YACC are successful extensions of the concept and the legacy; they are functioning, and most of the 'bugs' have been worked out.



Randy Sheinberg

"To completely dismantle such programs simply does not make good economic sense when we can be reasonably certain that sometime in the not-too-distant future, they will be mandated to begin again. To begin again means putting the bureaucracy back into place, working out the administrative problems again, again acquiring the tools and equipment necessary, and so on, all at substantial cost."

This year, Couch points out, because there were not the "enormous" start-up costs, it was possible to absorb some of the FY 1980 budget cuts by putting participants on projects that are "less visible, less sophisticated, but just as necessary — and not just routine maintenance." Because the mechanism is in place, Connecticut could at present, Couch says, take on 500 YACC enrollees instantly without having to contract out with anyone to run these projects.

YACC member Sapora Lee Wilson of Hartford has been working in DEP's Operations and Maintenance Unit in Hartford. In part a letter she recently wrote her congressman reads:

> ...all of these people have helped me, and I want them to help the other Young Adults that come in my place. So will you please understand my letter, and please try to see what will happen to us if there is no job for us. Try to feel like you were in our shoes and trying to look for a job and this program is what helped you become a better person and to know that you can do it.
>
> Let me tell you, when I came to work here I could not type or file, and I did not know how to relate to people or know how to talk on the phone to people. Now I can type, and file, talk, and get you in touch with the right people, and, to tell the truth, I am proud of myself, that I can be heard and someone wants to listen to me.
>
> So, Mr. Cotter, that is why I think the program must go on, please, because if it does not, where will we go from here? So, I say again, help us help ourselves!!!
>
> Sincerely,
>
> Sapora Wilson

It may already be too late — if Congress has moved quickly. But think about saving one more endangered species, and consider writing your own congressman. ■

Nuisance wildlife

From page 3

Repellents work with most nuisance animals. However, there are many drawbacks. They must be applied at just the correct time, and they must be reapplied if they are washed off by several successive rains. They are expensive, and fruits and vegetables which have been treated must be thoroughly washed. Any time repellents are used manufacturers' directions must be strictly followed. Since repellents do not remove them, the animals may move from treated plants to untreated plants, creating an expensive game.

The third method of preventing damage is the removal of the animal. This involves trapping, shooting, or poisoning. Although these techniques may not be as appealing as the others, they are often the quickest, most successful, least expensive, and sometimes are the only way.

Traps come in a variety of types, shapes, and sizes, from snap traps to box traps to jawed traps. Box traps and jawed traps, used properly, catch the animal alive and unharmed, and the trapper can decide on its disposition. These traps are selective so if the neighbor's cat or the family dog gets caught it can be released unharmed. Trapping is very effective for the control of most rodents, from field mice to woodchucks. Traps should be placed in runs, dens, or other areas the animal frequents. They can be baited with apples or a peanut butter and oatmeal mixture or other suitable baits.

Shooting is effective in controlling larger pests. It is very inexpensive; however, it requires patience and skill. It is very selective, and the animal is killed quickly. If shooting is used as a control technique, the shooter must be experienced in the use of the weapon, and the shooting must be done in a safe location.

In some instances nuisance wildlife becomes so numerous and causes so much damage that the only effective control is by poisioning. Poisoning is usually done only by commercial growers and should be avoided by backyard gardeners. An exception is the use of poisonous gas bombs for the control of woodchucks.

Every situation involving wildlife damage must be assessed individually before selecting a control method. Whatever method is selected, the user should be thoroughly knowledgeable in its use. Before attempting to control nuisance wildlife, make it a point to consider all safety aspects required by each technique. Be aware that laws and regulations may prohibit or restrict the use of a specific technique in your situation. Questions about specific problems can be directed to DEP field offices. ■

"BTU bubble"

From page 9

simple -- a plant which significantly increases its production rate while consuming the same amount of energy would have caused more pollution had it not used energy more wisely.

Because such an interpretation may cause some local increases in air pollution, no plant will be granted permission to burn higher sulfur fuels unless an analysis by the DEP ensures that all applicable air quality standards will not be exceeded. In addition, no company will be granted permission to burn higher sulfur fuels under this program unless all of its plants in Connecticut are in compliance with current air pollution control regulations or are on an expeditious compliance timetable. Any base year between 1972, the year that Connecticut first required statewide use of low sulfur fuels, and 1979 may be used. Also, this allowance will be re-negotiated each year.

The application of the "BTU bubble" should allow the surplus improvement in air quality, which the State has produced with its low sulfur-in-fuel program over the last eight years, to be "traded in" for energy and economic advantage. This much needed relief is a vital necessity at this time of rapidly rising fuel costs. This new program will also better coordinate State energy, environmental, and economic objectives. The State's energy and comprehensive planning agencies helped develop this new policy. The Department of Economic Development will provide low interest loans for energy conservation purposes to further encourage companies to take advantage of this program. Furthermore, it is hoped that the case-by-case application of the above program will stem the rising costs of energy and further encourage energy conservation and the use of alternative sources of "clean" energy without jeopardizing the important progress the State has made in protecting the public health and the enjoyment of Connecticut's environment. ■

Science center offerings

The Thames Science Center (Gallows Lane, New London — 442-0391) is offering a four-session introductory course on "Rocky Intertidal and Tidal Marsh and Estuary Habitats" for adults and young people fourteen and over, mornings Monday, June 30, through Thursday, July 3. Registration is required. Tuition is $40; $30 for members. Small laboratory fee.

The center is also offering a variety of summer programs for children and teens four through sixteen years old. ■

Family field trips

This year the Connecticut Audubon Society offers one of the most varied arrays of family field trips ever during a trip season which began in April and concludes August 18 with a five-day canoeing expedition along Maine's St. Croix River.

Other offerings include whale watching aboard the Dolphin III out of Provincetown; bird banding workshops in Fairfield; natural history walks in Danbury, Greenwich, Salisbury, and Milford; sailing Long Island Sound from Norwalk, New Haven, and Point Judith; and exploring Connecticut's beaches, marshes and shoreline in recognition of the Year of the Coast.

Advance registration is required for all trips. A descriptive brochure is available. For information, call Milan G. Bull, Director of Natural History Services, 259-0416, or write to the Connecticut Audubon Society, 2325 Burr Street, Fairfield, CT 06430. ■

Aquatic plants and their control

By Larry Bandolin, Regional Fisheries Biologist

Larry Bandolin photos

Just as a plowed field doesn't stay free of weeds very long, a new pond will soon be colonized with one or more aquatic plants. Aquatic plants can be classified into two general categories, free floating (planktonic) and rooted.

The aquatic ecosystem cannot function without plants, especially the planktonic algae. Algae are the base of the food chain upon which all other animals depend. The billions of cells of these free floating algae are fed upon by a myriad of tiny animals which are in turn fed upon by increasingly larger animals until predatory fish, birds, and animals top off the chain.

Not everyone looks upon aquatic plants as an asset to our aquatic ecosystems. When aquatic plants become overly abundant, they can interefere with swimming, boating, and fishing, and they are often considered unsightly. When the planktonic algae become very abundant, they impart a brownish or pea soup green color to lakes and ponds. A great increase in numbers of algae is called a bloom.

The death and decomposition of these billions of algal cells can use up all of the oxygen in deep lakes and make the deep waters uninhabitable for oxygen breathing organisms. Most of Connecticut's lakes have little or no oxygen in the deep water in the late summer and early fall. In small ponds and shallow lakes, anoxic conditions rarely occur because the wind constantly mixes the water. Reduced oxygen levels can occur in shallow water lakes and ponds, however, after several cloudy days or during early morning hours. When aquatic plants are not producing excess oxygen from photosynthesis, they use oxygen from the water thus causing a decrease in the oxygen content.

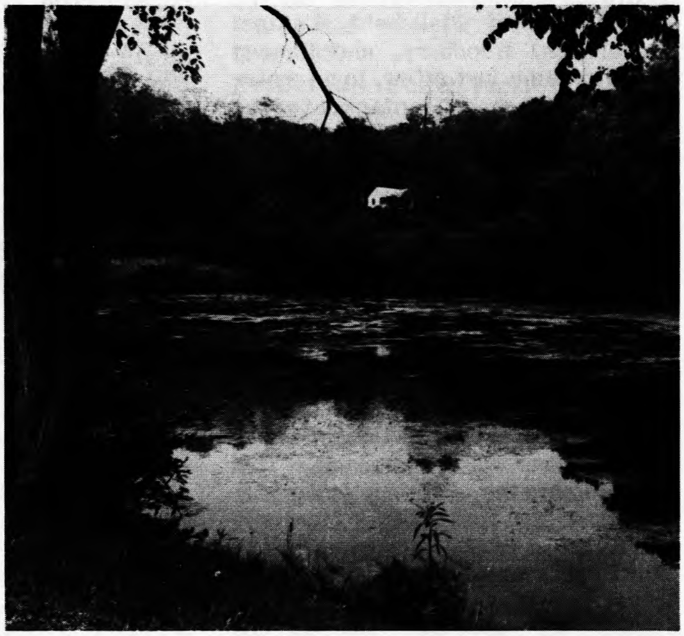
There are several algae that form cottony looking masses. These masses are made up of single cells that form fine, hairlike filaments which are loosely anchored to the bottom in shallow water. Gas bubbles from photosynthesis and respiration often become trapped in the masses and cause them to float to the surface where they sometimes cover large areas of small ponds and lakes.

The rooted aquatic plants can be divided into three general types: the completely submerged, those with floating leaves, and those with leaves mostly above the water surface. Rooted aquatic plants, besides providing food for other aquatic organisms, also provide a large amount of surface area for the plants and animals that inhabit our freshwater lakes and ponds to grow on. Rooted aquatics also provide cover for larger animals.

Rooted aquatic plants can only grow to the depth of sunlight penetration and therefore cannot produce deep water oxygen deficits. In shallow water lakes and ponds, rooted aquatics can, like algae, cause decreases in oxygen after a cloudy day or during the early morning hours. During winters with extensive ice and snow cover, when sunlight does not penetrate into shallow lakes and ponds, the decomposition and respiration of rooted aquatics can use up the oxygen and cause entire populations of fish to die. Winter kills of fish are not uncommon in Connecticut.

When aquatic plants become abundant, people begin to look for methods of control. Two methods to reduce the plants are commonly used. The more environmentally safe method is mechanical removal. It will only work for rooted aquatics and for algal masses. The method can be as simple as pulling the offending plants out by hand, or as complex as using expensive floating "weed harvesters." The major drawback to hand removal is that it takes time and effort, especially if large areas of a pond are affected.

Chemical treatment of both algae and rooted aquatics is often used where large areas must be treated. Before you use aquatic herbicides you must obtain a permit from the Connecticut Department of Environmental Protection. Identification of the offending plant or plants is very important because some of the herbicides are used to control specific plants. The dosage of chemicals is also an important point to consider since too large a dose can cause the death of fish and other aquatic animals. The DEP can help you in your identification of aquatic plants and can suggest the right chemicals and dosage. A brochure on the control of aquatic plants, Control of Water Weeds and Algae, is available, at no cost, from the Information & Education Unit, Rm. 112, State Office Bldg., Hartford, CT 06115. ■



208
water quality management

Hazardous waste legislation passes

During the 1980 session of the Connecticut General Assembly legislation was passed which resulted from work initiated and carried out by the Connecticut 208 Program. Substitute House Bill 5400, An Act Concerning Hazardous Waste Facilities, now awaits the Governor's signature. This new law will have a far-reaching effect on the environment of Connecticut.

Over the past two years Connecticut residents have become increasingly aware of problems associated with the improper disposal of hazardous industrial wastes. In the communities of Plainfield, Canton, Southington, Woodbury, and Beacon Falls, to name just a few, local water supplies have been contaminated by industrial wastes. In each of these incidents affected local residents were forced to use alternate water supplies because principal supplies were unfit to drink. All of these incidents involved groundwater contamination.

Until very recently Connecticut's industries, as well as industries in each of the other 49 states, were virtually without regulation in terms of hazardous waste disposal. This resulted in the indiscriminate deposition of tons of potentially hazardous wastes in private and municipal disposal sites across the State and the nation. However, Connecticut and the rest of the country are now under federal mandate via the Resource Conservation and Recovery Act (RCRA) to properly dispose of its hazardous industrial wastes.

Unfortunately, at the present time only three small facilities capable of treating and disposing of these wastes exist in the State. Moreover, each of these firms will have to modify its processes to some degree in order to comply with the federal RCRA requirements, and together these firms are capable of handling only a fraction of the 100,000,000 gallons of hazardous wastes which Connecticut's industries generate annually.

Therefore, the Connecticut 208 Program has recently completed a major feasibility study to determine what will be needed in order to adequately handle the State's hazardous wastes. Based on recommendations of this study, the 208 Program in conjunction with the Industrial Waste Management and Recovery Task Force, prepared the legislation which, after some amendments, was recently enacted into law.

The Task Force, which comprised members of industry, government, citizen and environmental organizations, worked very closely with Representative John Anderson of Newtown, Co-Chairman of the Environment Committee of the Connecticut General Assembly.

The new law establishes a siting procedure which will be carried out by an as-yet-to-be-constituted State board. The Board would not meet until a proposed facility could demonstrate that it could successfully meet the criteria for all appropriate environmental permits from the Department of Environmental Protection. Once the environmental considerations were satisfied the Board would examine such issues as the public safety, traffic, and socioeconomic impacts of the proposed facility. If these considerations could be met a Certificate of Public Safety and Necessity would be issued. Only then could a facility be built. The legislation also allows for local review through the Planning and Zoning and Inland Wetland permit processes; however, the State Board has the authority to overrule a negative local decision through a two-thirds vote.

Other pertinent sections of the law include definitions of the wastes to be considered (nuclear wastes will not be included) and types of facilities to be regulated. The law also establishes procedures by which other local agencies such as conservation, police, and fire commissions can have input into the facility siting procedure. A tipping fee schedule is also provided by which a host community shall be compensated by the treatment facility.

At this time a committee to examine and recommend the make-up of such a Board will be formed in the General Assembly. This committee must make its recommendations by January 1, 1981. Once established, the Board will be empowered to carry out the provisions of the new law on July 1, 1981.

With the implementation of this procedure it becomes feasible to construct a facility that can safely treat and dispose of Connecticut's hazardous wastes. Once such a facility becomes operational, a major step will have been taken to prevent contamination of Connecticut's water supplies. With any luck at all, incidents such as those in Plainfield, Canton, Southington, Woodbury, and Beacon Falls will become a thing of the past.

By Joseph M. Rinaldi,
208 Public Participation Coordinator,
P.O. Box 1088, Middletown, Ct. 06457

Experimental archaeology

The American Indian Archaeological Institute (off Rt. 199 in Washington — 868-0518) will offer a summer program in experimental archaeology for teenagers 13- to 16- years old. Called "Using Natural Resources as the Connecticut Indians Did," it will allow participants to make and use stone and clay tools, fish with hand-made implements, gather plants and prepare foods, and construct a dwelling.

Program runs 8:30 a.m.—3 p.m. weekdays June 30-July 3 and July 7-11. Tuition is $85 per week; two weeks, $150. Limited to 15 participants.

AIAI is also planning crafts workshops and field work weeks during July and August. Contact them for more information.

The AIAI's research and education center for the study of prehistoric man in the Northeast includes a 12,000-year old mastodon, Connecticut Indian artifacts, a life-sized Indian log house, and a museum gift shop. It's open Monday through Saturday, 10-4:30; Sunday, 1-4:30. Admission: $2, adults; $1, children. ■

coastal
area
management
71 capitol avenue hartford conn. 06115

CAM NEWS

Guidebook

"From Byram Point to Barn Island," a citizen's guidebook to Connecticut's Coastal Area Management (CAM) Program, has recently been published. It represents our attempt to concisely describe the history, development, and potential of Connecticut's CAM Program.

The 16-page booklet touches on coastal management initiatives, the federal Coastal Zone Management Act of 1972, the establishment of Connecticut's Program, basic problems facing the Connecticut coast, the Connecticut Coastal Management Act, and the major components of the program.

"From Byram Point to Barn Island" is meant to provide those citizens who have not been directly involved with a basic understanding of the CAM Program. Likewise, it may also serve as a guide to the many citizens who have been active in program development. In either case, we hope that it encourages further public participation in the ongoing CAM Program.

The following is an excerpt from the guidebook.

Counting agencies at the state and federal level and relevant commissions and boards in each of Connecticut's thirty-six coastal municipalities, literally hundreds of independent decision-making bodies are involved in the planning and management of the coast. However, no notable coordination, uniform guidance, or common long-range direction exist among these agencies regarding coastal development and protection. Individual legal authorities that deal with one geographic area or one specific issue often do not adequately address coastal problems that cross town lines or involve a large number of interrelated issues.

A major consequence of this lack of coordination among management authorities historically has been an inattention among decision-makers to the overall fate of coastal resources and their capacity and limits in supporting development activity. For example, nearly 15,000 acres of Connecticut's original tidal wetlands have been destroyed by encroaching development, most of them during 30 years immediately following World War II.

Connecticut now leases out only one-fourth of the shellfish beds that it once did because of degraded water quality, due to inadequately treated domestic and industrial effluent and other "non-point" water pollution sources such as stream water runoff. The closing of shellfish beds has meant the loss of a 3 to 6 million dollar industry annually. Many houses have been constructed in hazardous coastal flood and erosion prone areas, jeopardizing the buildings (and the occupants), exposing them to considerable damage in the event of severe storms, and costing the State of Connecticut millions of dollars in continuing expenditures for flood and erosion protection. While legislative and governmental programs have been developed to respond to each of these problems in turn, there has been no centralized focus on responding to all in the context of long-term use and protection of coastal resources.

The CAM Program has been designed to address these basic management deficiencies of inadequate coordination and consideration of coastal resources. Correction of these shortcomings should, in turn, greatly facilitate the solution of many specific problems and issues which have been perpetuated or caused by these major management problems.

Copies of "From Byram Point to Barn Island" may be obtained by calling 566-7404, or writing the CAM Program, 71 Capitol Ave., Hartford, CT 06115. ■

Camping

From page 2

more people want to go camping and welcome an opportunity to book a site for two weeks or less. It is noteworthy that the Connecticut reservation system has been a model for those of Rhode Island, Vermont, several midwestern states, and Washington State.

Regional Office Addresses

REGION I is in the northwest corner of the State: P.O. Box 161, Pleasant Valley, CT 06063; (203) 379-0771.

American Legion State Forest, P.O. Box 161, Pleasant Valley 06063: $3.
Black Rock State Park, Thomaston 06787: $3.
Housatonic Meadows State Park, Cornwall Bridge 06754: $3.
Lake Waramaug State Park, New Preston 06777: $3.
Macedonia Brook State Park, Kent 06757: $2.
Taylor Brook Campground, care of Burr Pond State Park, R.F.D., Torrington 06790: $3.

REGION II covers the southwest quarter of the State: 251 Judd Hill Road, Middlebury, CT 06762: (2030) 758-1753.

Kettletown State Park, Southbury, 06488: $3.
Sleeping Giant State Park, 200 Mt. Carmel Ave., Hamden, 06514: $2.

REGION III is in the middle eastern quarter of the State: Box 150-A, East Hampton, CT 06424: (203) 295-9523.

Cockaponset State Forest, Haddam 06438: $2.
Devil's Hopyard State Park, East Haddam 06423: $2.
Hammonasset Beach State Park, Box 271, Madison 06443: $4.
Mashamoquet Brook State Park, Pomfret Center 06259: $2.
Rocky Neck State Park, Niantic 06357: $4.

REGION IV covers the far eastern quarter of the State: Box 23-A, Voluntown, CT 06384: (203) 376-2513.

Hopeville Pond State Park, Jewett City 06351: $3.
Natchaug State Forest, Eastford 06242: $3. (Horse camp only.)
Pachaug State Forest, Voluntown 06384: $3. (No reservations needed for regular camping, but reservations are needed for horse camp.) ■

Trailside Botanizing

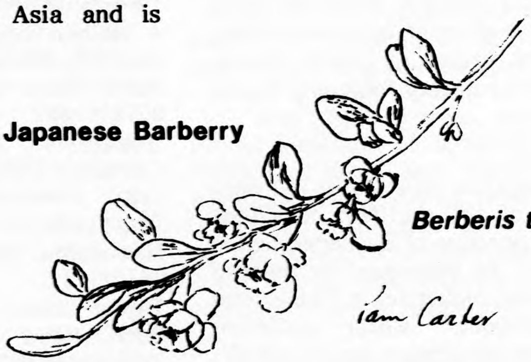
by G. Winston Carter

Spectacular flowers are nearly always noticed, but many plants have flowers that are interesting and attractive but often go unnoticed. The Japanese barberry is a plant that produces flowers of this type. It hides its solitary yellow flowers, which bloom from May to June, under its leaves. The bright red fruit that it produces is exposed after the leaves fall for the winter.

The plant may appear along the edge of a field or perhaps along a trail in the woods. One may wonder why it is there because it is an alien plant introduced from Asia and is usually found as part of a hedge on lawns. Growing in a wild condition it is commonly referred to as an "escape." Probably it was started there by seeds that passed through the intestine of some bird because the fruit is a popular wildlife food.

The Japanese barberry is our most common barberry having largely replaced the European barberry (Berberis vulgaris) as an ornamental shrub because, unlike the European species, it doesn't form an intermediate host for wheat rust. Japanese barberry has solitary flowers, as mentioned, while European barberry has them in clusters. Both species have spines which are stiff and sharp — three in a cluster in the European barberry and only one in the Japanese type.

It is surprising how many alien plants and animals are presently found in this country and especially interesting to discover how they got to where they now live. An interesting book on this subject is Charles Elton's The Ecology of Invasions by Plants and Animals.



Japanese Barberry

Berberis thunbergii

DEP Citizens' Bulletin
State of Connecticut
Department of Environmental Protection
State Office Building
Hartford, Connecticut 06115

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